

rejected under 35 USC 103 as being unpatentable over U.S. Patent 4,281,550 to Erickson or U.S. Patent 3,587,561 to Ziedonis in view of U.S. Patent 4,211,949 to Brisken et al. combined with U.S. Patent 4,344,327 to Yoshikawa et al. or U.S. Patent 4,409,982 to Plessset et al. Claim 3 was finally rejected under 35 USC 103 as being unpatentable over the above noted references in further view of U.S. Patent 4,479,069 to Miller or U.S. Patent 4,404,489 to Larson. In response to this Official Action, on August 18, 1986 Applicant filed an Amendment Under 37 CFR 1.116, which precipitated an Advisory Action indicating that the Amendment Under 37 CFR 1.116 was not sufficient to overcome the outstanding rejection of the application.

The present Rule 62 File Wrapper Continuation Application is filed in order to obtain consideration of a further amended claim 1 in which the limitations of claims 2 and 3 have been added to claim 1 and in which claim 1 has been further amended to state that the flexible transducer assembly of the present invention includes a plurality of flexible printed circuit boards having electrical lead pattern sandwiched between the piezoelectric plate and the flexible backing plate and connected to respective of the transducer elements. Additionally, claims 8-10 are submitted herewith, in which claim 8 further defines the flexible printed circuit boards as having grooves cut therethrough in correspondence with the grooves defining the transducer elements to separate the lead patterns in correspondence with the

respective transducer elements. Claims 9 and 10 respectively further define the invention recited in claims 1 and 8 in terms of flexible printed circuit boards having divergent tips which are bent around sides of the base such that the divergent tips are gathered and aligned parallel to a common line.

Amended claim 1 accentuates structure by which a reliable electrical connection is made to the flexible transducer assembly bonded to the convex surface of the base of Applicant's invention. On the other hand, claim 8 accentuates further structure of Applicant's invention by which the electrical integrity of the electrical connections to the closely spaced transducer elements are further assured. Claims 9 and 10 similarly are directed to further advantageous features of the flexible printed circuit boards, whereby a compact convex array of ultrasonic transducers is attained.

Antecedent basis for the above changes to claim 1 are found in originally filed claims 2 and 3 and in Applicant's disclosure as shown in Figures 1, 3, 4, 4a, 4b as described from page 8, line 20 through page 9, line 12 of the specification. In this regard, it is noted that Figure 3 as originally filed is in error in that the reference numeral designation "3" shown in originally filed Figure 3 should in fact have been --2-- consistent with Applicant's specific explanation at page 9 of the specification that the rear electrode is soldered to the lead lines L of the FPC board 5 and that the flexible backing plate 2 is bonded to

the rear electrode 32 (see page 8, line 25 through page 9, line 5). Accordingly, submitted herewith is a separate letter requesting approval to change the reference numeral designation "3" in Figure 3 to --2--.

In light of Applicant's prior arguments in support of patentability, and in view of the present Amendment further limiting the claims and further patentably distinguishing over the prior art of record, it is believed that the pending claims 1, 5 and 8-10 are in condition for allowance. In further support of this position, one or more Declarations under 37 CFR 1.132 substantiating the improved performance of Applicant's invention are being prepared for filing, and it is requested that the Examiner defer any further actions until such time as the prospective 37 CFR 1.132 Declarations are filed.

In the event that the Examiner has any further suggestions for advancing prosecution, the Examiner is respectfully invited to telephone the undersigned who would be happy to work with the Examiner to expedite the resolution of issues outstanding in the present application.

Respectfully submitted,

OBLON, FISHER, SPIVAK,
McCLELLAND & MAIER, P.C.

Marvin J. Spivak
Registration No. 24,913
Attorney for Applicants

Crystal Square Five-Suite 400
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
(703) 521-5940